

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/079313 A3

(51) International Patent Classification⁷: **H03F 3/04**

(21) International Application Number:
PCT/US2005/004429

(22) International Filing Date:
14 February 2005 (14.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/544,719 13 February 2004 (13.02.2004) US

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEUNG, Vincent, W.** [CA/US]; 1870 Baldwin Road, #62, Yorktown Heights, NY 10598 (US). **GUDEM, Prasad, S.** [—/US]; 7180 Shoreline Drive, #5313, San Diego, CA 92122 (US). **LARSEN, Lawrence, E.** [—/US]; 13771 Mercado Drive, Del Mar, CA 92014 (US).

(74) Agent: **FALLON, Steven, P.**; Greer, Burns & Crain, Ltd., 300 S. Wacker Drive - Suite 2500, Chicago, IL 60606 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

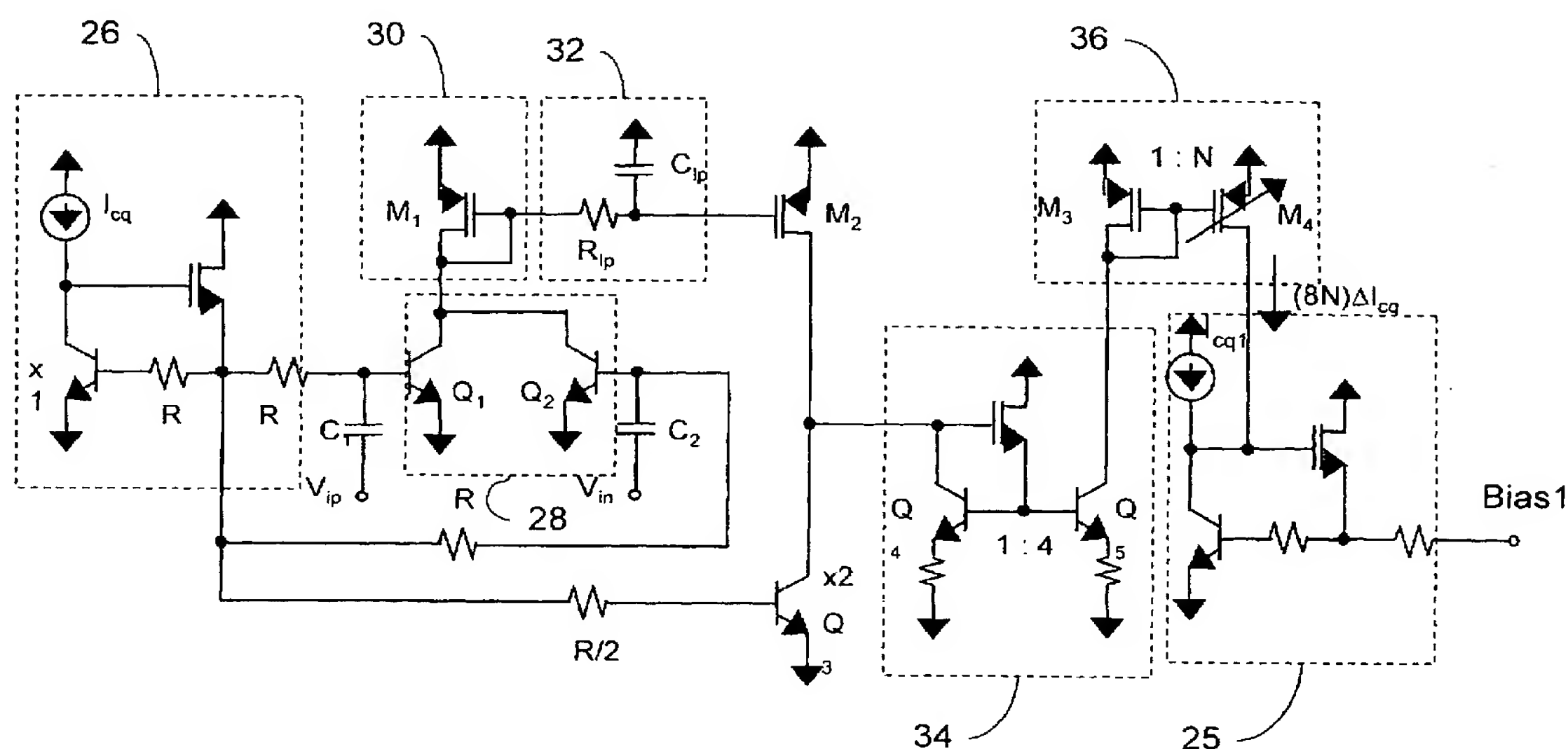
Published:

— with international search report

(88) Date of publication of the international search report:
12 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ADAPTIVE BIAS CURRENT CIRCUIT AND METHOD FOR AMPLIFIERS



(57) Abstract: An adaptive bias method and circuits for amplifiers that provide a substantial current boost based at least partly upon a sensed input power of an amplifier circuit. Methods and circuits of the invention provide an additional bias current based upon the sensed input power. Circuits of the invention may be simple, area-efficient, low-power, stable and digitally-programmable. In addition, methods and circuits of the invention may be used with a number of amplifier circuit configurations, including amplifiers having either inductor and/or resistive degeneration.